

AMENDMENTS TO THE CLAIMS

This listing of the claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A heat insulating and sound insulating duct wall structure ~~which composes~~ comprising a gas flow channel, the ~~[[same]]~~ duct wall structure comprising:

an inner plate at a gas flow side;

an outer plate at ~~[[the]]~~ an atmospheric side;

~~one or more~~ at least one intermediate member ~~members with its~~ having a lengthwise direction disposed in parallel to the inner plate and outer plate in an intermediate portion between the inner plate and the outer plate;

a plurality of first supporting members both ends of which are, respectively, fixed at the inner plate and intermediate member in order to retain the spacing between the inner plate and the intermediate member;

a plurality of second supporting members both ends of which are, respectively, fixed at the outer plate and intermediate member in order to retain the spacing between the outer plate and the intermediate member;

a vibration deadening washer attached to ~~[[the]]~~ a connection portion at the intermediate member side of the second supporting members, wherein the attaching position of the vibration deadening washer is provided in an area in a duct wall having a temperature of 400°C or less; and

a heat insulating member filled in ~~[[the]]~~ a clearance between the intermediate member, the first and second supporting members and the vibration deadening washer between the inner plate and the outer plate.

2.- 3. (Canceled)

4. (Original) The heat insulating and sound insulating duct wall structure according to Claim 1, wherein the vibration deadening washer is provided at half the entire thickness of the heat insulating member filled between the inner plate and the outer plate or at the outer plate side position from the half thereof.

5. (Currently Amended) The heat insulating and sound insulating duct wall structure according to Claim 4, wherein a heat insulating member filled between the intermediate member and the outer plate ~~is composed of~~ comprises a vibration deadening material or a vibration dampening material having a thickness which is greater by at least three times than the thickness of the outer plate, and is adhered to the outer plate in a state where the heat insulating member is compressed at a compression ratio of at least 10% of the entire thickness thereof.

6. (Original) The heat insulating and sound insulating duct wall structure according to Claim 1, wherein a plurality of holes through which the second supporting members are passed are provided in the intermediate member in the lengthwise direction of the intermediate member.

7. (Currently Amended) The heat insulating and sound insulating duct wall structure according to Claim 6, wherein a plurality of holes through which the second supporting member secured at the intermediate member are passed ~~are composed with~~ comprises a hole for fixing the vibration deadening washer disposed at the middle part in the lengthwise direction of the intermediate member and ~~a one or more sets~~ at least one set of loose holes disposed at the symmetrical positions of the intermediate member in the lengthwise direction thereof centering around the corresponding fixing hole .

8. (Original) The heat insulating and sound insulating duct wall structure according to Claims 1, wherein a plurality of intermediate members are, respectively, disposed in both the gas flowing direction and the direction orthogonal thereto with the lengthwise direction thereof orthogonal to the gas flowing direction.

9. (Original) The heat insulating and sound insulating duct wall structure according to Claim 1, wherein a plurality of intermediate members are, respectively, disposed in both the gas flowing direction and the direction parallel thereto with the lengthwise direction thereof parallel to the gas flowing direction.

10. (Currently Amended) The heat insulating and sound insulating duct wall structure according to Claim 1, wherein the inner plate is ~~composed of~~ comprises a plurality of inner plate members laminated to each other, and the respective inner plate members are provided with a plurality of holes through which the first supporting member is passed.

11. (Currently Amended) The heat insulating and sound insulating duct wall structure according to Claim 10, wherein a plurality of holes through which the first supporting member secured in the respective inner plate members are provided with a hole for fixing the vibration deadening washer disposed at the middle part of the inner plate member and ~~one or more sets~~ at least one set of loose holes disposed at symmetrical positions of the inner plate members centering around the corresponding fixing hole.

12. (Original) The heat insulating and sound insulating duct wall structure according to Claim 10, wherein the respective inner plate members are disposed so as to partially overlap with the inner plate member adjacent thereto, the inner plate member at the upstream side of a gas flow is installed on the inner plate member at the downstream side thereof, and the inner plate member at the upper side in the perpendicular direction is installed on the inner plate member at the lower side in the perpendicular direction.

13. (Original) The heat insulating and sound insulating duct wall structure according to Claim 1, wherein a middle plate for bifurcating the heat insulating member is provided at the attaching position of the intermediate member along the lengthwise direction of the inner plate and outer plate.

14.-17. (Canceled)

18. (New) A heat insulating and sound insulating duct wall structure comprising a gas

flow channel, the duct wall structure comprising:

- an inner plate at a gas flow side;

- an outer plate at an atmospheric side;

- at least one intermediate member having a lengthwise direction disposed in parallel to the inner plate and outer plate in an intermediate portion between the inner plate and the outer plate;

- a plurality of first supporting members both ends of which are, respectively, fixed at the inner plate and intermediate member in order to retain the spacing between the inner plate and the intermediate member;

- a plurality of second supporting members both ends of which are, respectively, fixed at the outer plate and intermediate member in order to retain the spacing between the outer plate and the intermediate member;

- a vibration deadening washer attached to a connection portion at the intermediate member side of the second supporting members; and

- a heat insulating member filled in a clearance between the intermediate member, the first and second supporting members and the vibration deadening washer between the inner plate and the outer plate,

- wherein a plurality of holes through which the second supporting members are passed are provided in the intermediate member in the lengthwise direction of the intermediate member, and

- wherein a plurality of holes through which the second supporting member secured at the intermediate member are passed comprises a hole for fixing the vibration deadening washer disposed at the middle part in the lengthwise direction of the

intermediate member and at least one set of loose holes disposed at the symmetrical positions of the intermediate member in the lengthwise direction thereof centering around the corresponding fixing hole .

19. (New) A heat insulating and sound insulating duct wall structure comprising a gas flow channel, the duct wall structure comprising:

- an inner plate at a gas flow side;

- an outer plate at an atmospheric side;

- at least one intermediate member having a lengthwise direction disposed in parallel to the inner plate and outer plate in an intermediate portion between the inner plate and the outer plate;

- a plurality of first supporting members both ends of which are, respectively, fixed at the inner plate and intermediate member in order to retain the spacing between the inner plate and the intermediate member;

- a plurality of second supporting members both ends of which are, respectively, fixed at the outer plate and intermediate member in order to retain the spacing between the outer plate and the intermediate member;

- a vibration deadening washer attached to a connection portion at the intermediate member side of the second supporting members; and

- a heat insulating member filled in a clearance between the intermediate member, the first and second supporting members and the vibration deadening washer between the inner plate and the outer plate,

wherein the inner plate comprises a plurality of inner plate members laminated to

each other, and the respective inner plate members are provided with a plurality of holes through which the first supporting member is passed, and

wherein a plurality of holes through which the first supporting member secured in the respective inner plate members are provided with a hole for fixing the vibration deadening washer disposed at the middle part of the inner plate member at least one set of loose holes disposed at symmetrical positions of the inner plate members centering around the corresponding fixing hole.